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Implementing The Tracking Network

breakout ABSTRACT

Abstract No. 6

TITLE

USING U. S. GEOLOGICAL SURVEY'S DATA, KNOWLEDGE, AND MODELS TO HELP BUILD AN ENVIRONMENTAL PUBLIC HEALTH TRACKING NETWORK

TRACK

Network Content

OBJECTIVES

The kind of information that the USGS can provide to support environmental public health tracking networks.

SUMMARY

U.S. Geological Survey (USGS) personnel maintain databases, possess knowledge, and have developed models that can be used to help characterize environmental hazards and exposures for the environmental public health tracking (EPHT) network. This USGS information can be used to support EPHT content and data layers by describing and characterizing the source, transport, and fate of water-borne hazards. At least four USGS databases could be of value to EPHT. First, the National Water-Quality Assessment Program is a source for systematic, long-term, nationwide information on the quality of streams, ground water, and aquatic ecosystems of the most important surface-water basins and aquifers in the United States. Second, the National Water Information System (NWIS) database was formed to disseminate water data (both quantity and quality) to the public. These data were collected for a variety of studies with differing objectives. Third, National Geochemical Survey database includes measured concentrations of arsenic and other natural contaminants in primarily stream sediments. These data may be helpful in explaining the sources of some water hazards. Fourth, a database is available to show county-based water-use patterns across the Nation. USGS scientists have knowledge and published reports about geology, aquifer characteristics, and factors that control the distribution and concentrations of water hazards. Several national-scale coverages are available describing geology, ground-water regions, estimated runoff, ground-water recharge, geochemistry of soils and rocks, soil characteristics, climate, agricultural information on the use of herbicides and nutrients, and land use and land cover. USGS scientists have developed several models that could be helpful to the objectives of the EPHT program including ground-water flow models and statistical models that describe and estimate the occurrence and concentrations of particular hazards like atrazine, nitrate, volatile organic compounds, and arsenic in streams and shallow ground water.

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NATIONAL Environmental Public Health Tracking Program